DOCUMENT RESUME

ED 468 711 EC 309 182

AUTHOR Fassett, David R.

TITLE How Can I Help Myself? Self-Knowledge, Self-Advocacy, and Academic Success.

PUB DATE 2002-00-00
NOTE 43p.
PUB TYPE Reports - Research (143) -- Tests/Questionnaires (160)
EDRS PRICE EDRS Price MF01/PC02 Plus Postage.
DESCRIPTORS *Academic Achievement; Action Research; *Cognitive Processes; High Schools; *Instructional Effectiveness; Knowledge Level; *Learning Disabilities; *Self Advocacy; *Self Concept; Self Management; Symptoms (Individual Disorders); Teaching Methods

ABSTRACT

This report discusses findings from a study that investigated the effectiveness of a student's improved self-knowledge of his or her specific learning disabilities in achieving academic success and improved self-advocacy skills. Forty-four general and special education faculty members and para-educators, and 13 ninth-grade students and their parents participated in this action research. All of the student participants were members of larger, inclusive science class. At the beginning of the study, students and their parents were given a Cognitive Processing Inventory (CPI). Based on the outcome of the CPI, they were then given a list of recommendations for strengthening their processing weaknesses. Data were gathered from surveys of students and teachers, from students' grades, and from observations. Results indicated nine students improved a minimum of one letter grade in one subject, however, only two-thirds reported a better understanding of their learning disability. Six of the nine students thought they had used some of the suggestions they were given. Forty-six percent of the entire group stated that they had either increased their self-knowledge and/or used the recommendations. Less than half of the study's participants reported advocating for themselves, while teacher observations of self-advocacy were negligible. Appendices include survey instruments. (Contains 20 references.) (CR)

Reproductions supplied by EDRS are the best that can be made
from the original document.

EC

Running Head: HOW CAN I HELP MYSELF? SELF-KNOWLEDGE

ED 468 711

How Can I Help Myself?

Self-Knowledge, Self-Advocacy, and Academic Success

David R. Fassett

Indiana University South Bend

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

D. Fassett

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

EC309182

BEST COPY AVAILABLE

Table of Contents

List of Appendices 3

Appendices 30

Abstract 4

Introduction 5

Literature Review 6

Method 10

Participants and Setting 10

Materials 11

Procedure 12

Results 14

Interpretations 16

Plan of Action 20

Suggestions for Future Research 21

Summary 21

References 23

Bibliography 27

EC 309182

List of Appendices

Appendix A: Preliminary Teacher Survey 31

Appendix B: Follow-up Teacher Survey 33

Appendix C: Student Survey 35

Appendix D: Student Grade Comparison 37

Appendix E: CPI for Parents and Students 38

Abstract

The author describes the effectiveness of a student's improved self-knowledge of his/her specific learning disability in achieving academic success and improved self-advocacy skills. Students and their parents were given a Cognitive Processing Inventory (CPI). Based on the outcome of the CPI, they were then given a list of recommendations for strengthening their processing weaknesses. Data was gathered from surveys of students and teachers, from students' grades, and from observations. Results indicated almost 2/3 of the participants demonstrated improvement in academic performance. Less than half of the study's participants reported advocating for themselves, while teacher observations of self-advocacy were negligible.

How Can I Help Myself?

Self-Knowledge, Self-Advocacy, and Academic Success

Introduction

Topic Introduction

"I don't get it!" Students with learning disabilities, by definition and by law, have deficiencies in information processing. Crouse (1996) has stated that there are six ways the brain processes information, which are directly related to learning: visual processing, auditory processing, sequential/rational processing, conceptual/abstract processing, processing speed, and attention. A deficit in any one of these makes it difficult for a student to "get it." Although the testing psychologist may try to explain the deficiency, students, parents, and, unfortunately, teachers tend to focus on the universally used label, "Learning Disabled." Rarely are any of the interested parties given any guidance in dealing with and overcoming the deficit.

In the period of transition known as high school, it is vitally important for students and all of their support networks to understand exactly what information processing problems they face, in order to help each student become a successful adult. Each individual needs to understand the nature of his weakness and how to use his strengths to overcome the difficulty. A student having self-knowledge of their disability, and how to compensate for and overcome the deficit, gains power over their life. It stands to reason that this empowerment would lead to improved self-advocacy skills and academic achievement.

Purpose Statement

The purpose of this action research is two-fold: (1) To discover whether students with learning disabilities, who are made aware of their strengths and weaknesses in how they process information, can they improve their academic achievement and; (2) Whether

students with learning disabilities who learn to understand their deficits, can become better self-advocates?

Importance

The information gathered from this action research will serve as a catalyst for further discussion of the effectiveness of current self-advocacy programs, or the need to implement them. It will also provide information to assist professionals involved with students with learning disabilities, and their parents, in reassessing how initial and re-evaluation conferences are conducted.

Definitions of Terms

Terms used in this study, according to the literature, are still in the nebulous stage. They mean different things to different people and it is difficult to limit their meanings. One of the functions of the literature review was an attempt to define the definitions, and it is there that they may be found.

Literature Review

It was necessary to review the literature in order to develop a better understanding of what is meant by the term "processing" and to try to establish how we process information. While it is understood and agreed that the "disability" in learning disability relates to some difficulty with processing information, there is some disagreement about what is meant by the term information processing. While there is a basic understanding of what is meant by processing, the semantics do play a role in the shaping of the studies that were found while researching the topic.

Definitions of Processing

In the literature, definitions for information processing range from being one step in learning, encoding, which occurs after information has been taken in (Ross, Drysdale, & Schultz, 2001) to Neisser's (as cited in DeCiantis & Kirton, 1996) four stages of

information processing: initial acquisition, organization, internalization, and resultant knowledge. Cano-Garcia and Hewitt Hughes (2000) divide information processing into components that encode, combine, and compare information. Processing skills identified by a teacher in a study done by Davies (2000) included ability to read, manage large quantities of information, and to express themselves fluently and at length. Sheppard (2001) defines efficient processing as the ability to access, retrieve, and manipulate information. For the sake of this study, processing will refer to how the brain takes in, uses, stores, and expresses information (Crouse, 1996). Future researchers will also find information processing designated as cognitive operations (Tsai, 1999), thinking styles (Cano-Garcia & Hewitt Hughes, 2000) and learning styles (Gremli, 1996).

How Information is Processed

There also seems to be some debate over how information is processed. Torrance, Reynolds, and Ball (as cited in Cano-Garcia & Hewitt Hughes, 2000) were some of the first to relate processing to the hemispheres of the brain. They related that the left brain style processed in a conceptual and analytical way, while right brain style was characterized by processing in a synthesist and direct way. Gremli (1996) uses the words "analytical" and "global" to describe this hemisphericity while going on to explain that the terms left/right, analytical/global, and inductive/deductive have been used interchangeably. Left/analytic/inductives learn successively in small steps while right/global/deductives take in the broad concepts and then focus on the details (Gremli,1996). There is some question about hemisphericity. Research by Zalewski, Sink, and Yachimowicz (as cited in Cano-Garcia & Hewitt Hughes, 2000) does not support the notion. Springer and Deutsch (as cited in Cano-Garcia & Hughes Hewitt, 2000) do not believe that the explanation is so simple and they indicate no conclusive evidence to support it. Another pioneer in split brain research, Gazzaniga (1998) now

postulates there to be a great deal of individual variation in the functioning of the hemispheres, a plasticity that allows brains to adjust. While there is the possibility of a person being predominately one sided or the other, it is believed that the two hemispheres perform different and interdependent roles in the processing of information (Crouse, 1996). The left side of the brain handles the bulk of the sequencing, filing, storage, organization and details. The right side of the brain deals with the big picture, ideas, creativity, reasoning, and concepts (Crouse). This coincides with the Information Processing theory of the brain as a computer where different components perform different tasks (Sheppard, 2001).

There are two general areas that are relevant to all students with learning disabilities. In fact, they hold true for most people. To continue with the computer analogy: When we look for a good computer, we want processing speed and lots of memory. Our onboard computer has two memories, a long-term and a short-term or working memory. The working memory is the first stop for information that has entered the brain. Capacity of the working memory is limited to 3-9 chunks of information and it is called short term because it can only hold the information for 30 seconds (Reilly, 1998). Embretson (as cited in Reilly, 1998) states that without constant rehearsal, the information either moves into long term memory or it is lost. This happens so that room can be made for new input (Reilly, 1998). Lindsay and Norman (as cited in Meneal & Dwyer, 1999) argue that the longer an item is kept in short term memory by rehearsal the better the chances are that it will be retained in the long-term memory. Meneal and Dwyer believe that overt, physical rehearsal activities lead to a higher level of learning than covert, passive activities. Morris, Bransford, and Franks' (as cited in Meneal & Dwyer) transfer-appropriate processing principle states that the information to be

processed must be appropriate to the intended use of the information. This correlates with the assertion that memory is an associative structure (Lawson & Chinnappan, 2000).

Processing speed must be attended to if we are to help the student with disabilities help himself. All students with learning disabilities have difficulty when they are required to process through their weakest channel; but for some, speed is their weakest channel (Crouse, 1996). There is an optimal rate for processing information. If information arrives too slowly, no new learning takes place and if it is delivered too fast, a student becomes overloaded and frustrated (Reilly, 1998). Murray (as cited in Reilly) finds that too high a rate results in a "paralysis of analysis." Wait time is necessary for students to be able to handle the information they have before being given any more. The amount of time is dependent on the content or logic level (Tsai, 1999). As was stated earlier, if the channels become congested, the information will be lost.

Crouse's (1996) definition of processing correlates nicely with the model of the brain as a computer and possibly makes the concept of learning disabilities as processing disorders a little easier to understand. If information gets entered into the computer incorrectly, it may have no frame of reference to comprehend that a mistake has been made. It accepts the data as it receives it. A problem with the operating system may cause a computer to do things we do not want done or it may freeze up and crash. Bad memory chips or disks mean that everything that is entered will not be retained. Nonfunctioning monitors, printers, or speakers will not allow us to access the information we worked so hard to input. Anywhere along the line, a loose or broken cable can bring us to a halt. If we are persistent and knowledgeable enough, we can often find ways to compensate for the malfunction. The important difference between the machine and ourselves is that we are capable of making the adjustments and improving our lot.

Crouse (1996) lists six types of information processing related to learning: visual, auditory, sequential/rational, conceptual/holistic, speed, and attentional skills, and the implications of a deficit in any one of them. He also offers interventions and remediations to help students compensate and strengthen their individual weaknesses.

Self-Advocacy

A student's understanding of individual deficits is necessary for establishing the foundation for self-determination and self-advocacy. Hitchings (2001) found, in a study of 97 post-secondary students, that the majority had difficulty in describing their disability and its impact on their lives. The Individuals with Disabilities Education Act (1997) mandates that students have a voice in their transitional plans. Martin and Marshall (as cited in Eisenman & Chamberlin, 2001) defined self-determination as having the ability to act from awareness of personal needs and preferences, set and work towards goals, be self-advocating identify needed supports, and evaluate and adjust performance. Harris and Robertson (2001) suggest that to be successful, a student must possess a good degree of motivation and insight into his or her disability. Emphasizing independence and self-advocacy so that a student can seek additional educational employment opportunities leads to empowerment (Harris & Robertson). Sheehan and Sheehan (2000) and Simon (1999) both cite self-advocacy strategies as being key to their success in school and post-graduation lives.

Method

Participants and Setting

Forty-four general and special education faculty members and para-educators, and 13 ninth grade students, and their parents, participated in this action research. All of the participants are part of the educational community in a 1000-student, rural, consolidated high school in northern Indiana. The school is almost fully inclusional, offering only one

English class and one Math class for students who need more practice in basic skills. The staff volunteered to take part by completing two surveys. The student participants were members of a larger, inclusion science class, co-taught by the author. This allowed the researcher at least one period a day to implement parts of the study and to make observations. All of the students in the class, who had earlier been evaluated as having learning disabilities, were invited to take part. Originally 15 parents gave consent for their students to participate. One student later withdrew from school and another student's parent withdrew her permission.

Materials

The author created three surveys for this action research (see Appendixes A, B, and C). All the surveys used a Likert scale, ranging from 1 to 5, Strongly Disagree to Strongly Agree. One survey (see Appendix A) was distributed to the staff at the beginning of the research to discern their knowledge and feelings about students with learning disabilities in their classrooms. At the end of the study, the staff was asked to complete a follow-up survey (see Appendix B), to gauge if there had been any changes in their perceptions or increases in student self-advocating behavior. An N/A (Not Applicable) option was added to the last two questions on this survey, as certain responses to question three rendered them unusable. Students were asked to complete the third survey (see Appendix C), which served as a type of self-evaluation tool.

At the beginning of the study, the author used the Cognitive Processing Inventory (CPI), in order to ascertain each student's outstanding deficit(s) (see Appendix E). The CPI is an instrument developed by Dr. Scott Crouse in 1998 and was used for this study with his permission. It has a test-retest stability of .92 and split-half correlation range from .80 to .91. Global Processing Index correlation range from .92 to .95. The predictive validity is 78% with 12% false positive and 10% false negative predictions, and a

concurrent validity of 71% to 84%. After the CPI was administered, it was scored using both the Examiner's Manual and computer software, purchased from Dr. Crouse at ldinfo.com.

Uncovering the Mysteries of Your Learning Disability (Crouse, 1996) was a valuable reference tool during the course of this research, and a copy was given to each participating student, in the hopes it would supply them and their parents with some additional insights.

Procedures

The actual study took place during the third nine-week grading period. Preliminary staff surveys were distributed two weeks prior to the beginning of the term. These surveys were coded so that the researcher could discern who had responded, for analysis reasons. Letters to potential student participants' parents, as well as consent forms and a copy of the CPI, were sent home at the same time, via U.S. Mail to ensure their delivery.

The letters explained the proposed action research and emphasized the potential positive impact this could have on their student. Since Crouse claims better reliability and validity from parent responses to the CPI, parents were asked to complete the inventory and return it with the signed consent form. Stamped envelopes addressed to the researcher had been enclosed with the other materials for this purpose. As the grading period approached, reminder notes had to be sent home and phone calls were made in order to gather a large enough sample group. Ultimately, incentives, i.e. extra points and gift certificates, were offered to encourage the return of the consent forms and the author received the 15 responses he had thought necessary for a valid research sample.

On the day prior to the beginning of the third nine-week grading period, the CPI was administered to the students whose parents had given consent. A brief explanation of the

research project was given and the reason for the inventory was explained. The CPI was read aloud by the researcher, who gave short, non-committal clarifications as needed.

The author collected the inventories and, using the CPI computer program, scored both the student and parent responses. Some parents had chosen only to give their consent and had not completed their copy of the CPI. In those cases the researcher used only the student's information. The computer program both graphs the student's strengths and weaknesses, and gives a written summary. It then prints out specific recommendations for working on the diagnosed deficits.

Written summaries and the suggestions were distributed to the participating students on the first day of the term. The researcher encouraged the students to take them home and discuss them with their parents, selecting one or two of the recommendations that might work best for improving their classwork. During the next two weeks, the author met with each of the participating students to further explain the concept of self-advocacy and to inquire if they had talked with their parents about the CPI and their results. When it became apparent that very little thought was being given to the suggestions by the students and there appeared to be no discussion at home, the researcher distributed a copy of Uncovering the Mysteries of Your Learning Disability to each participating student. He asked that the students take it home and read it with their parents, in the hopes that it might stimulate some action. The author offered extra credit points to those students that returned a note from his/her parents saying they had read the book. One note was received.

During the remainder of the grading period, the author took on the roles of observer and cheerleader. He kept notes in his journal of any actions that he sensed implied self-advocacy. When students approached him, asking for his assistance in requesting an accommodation or modification, the researcher offered suggestions on how they could

appropriately solicit for themselves, encouraging them to follow through, and physically standing with them when they did.

At the end of the term, coded surveys were again sent out to the staff. The purpose of these surveys was to determine if they had observed any increase in self-advocacy during the previous nine weeks, and if they had, whether it had been accompanied by academic improvement. The author then isolated the responses of the teachers who had the participating students in their classrooms on a daily basis and had responded to both surveys.

The participating students were also given a survey. This questionnaire asked if they had noticed an improvement in their grades, if they felt it was related to a better understanding of their disability, and if they had used any of the suggestions they had been given. Participating students' grades in three classes - English, Math, and Science - were gathered and compared to their grades in these classes from the previous nine-week grading period.

Results

The original purpose of this action research was to answer the question, "What are the effects of self-knowledge of learning deficiencies on academic achievement of students with disabilities?" After reviewing the grades of the participating students, the answer appears to be positive. As the author progressed through the literature, a second, but by no means secondary, question arose. "What are the effects of self-knowledge on self-advocacy skills?" Here the data seemed to indicate there was no effect.

At the beginning of the study, 57 surveys were distributed to teachers and para-educators. 77% or 44 of them responded. When 57 surveys were handed out at the end of the study, 75% responded, although all of the people who answered the second survey were not the ones who had replied to the first. For better control of the research, only

responses from the staff who saw the participating students in class on a daily basis and answered both surveys were used. Of the 17 staff members who worked with the students daily, 10 returned both surveys.

From the first survey, the researcher found that five of the ten questions (questions 5-9, see Appendix A) had a direct relationship to the purpose of this study. When asked if they would comply with modifications and accommodations of which they were aware, 80% agreed or agreed strongly. The remaining two were uncertain. Eight of the ten respondents were unsure or didn't believe that students were aware of their own specific learning disability. Most of the staff, 70%, believed that students with learning disabilities should advocate for themselves. One of the educators wasn't sure if they would be open to modification suggestions from a self-advocating student. A teacher who strongly agreed to be open to such ideas stated that she "would listen but may not agree." Ninety percent thought that students who advocate for themselves have a better chance at improving their academic achievement (see Appendix A).

In the follow-up survey, only 60% of the staff felt that students should advocate for themselves (see Appendix B). One teacher, who strongly agreed that students should be self-advocates, said, "It depends whether one is advocating as an excuse with an attitude or whether she/he is really trying." It was a 50-50 split as to whether students who advocate for themselves have a better chance at improving their academic performance. Of the ten surveyed, only two had noticed an increase in self-advocacy over the length of the study. One teacher noticed an increase in student self-knowledge of their specific learning disability and the same teacher felt that these self-advocates had improved their grades.

Thirteen students were surveyed at the end of the nine-week grading period (see Appendix C). Seven of them felt that their grades had gone up during that time. The

remainder of the students were uncertain. When asked if they thought the increase was an indicator of a better understanding of their specific learning disability, eight thought it was, three thought it wasn't, and two students were unsure if it had any effect at all. Nine students claimed to have used some of the suggestions they were given at the beginning of the research. Six students stated they had asked their teachers to make changes to help them do better in class. All but two of the student respondents agreed with the statement, "I think other students would do better in their classes if they had this additional help."

The grades from three core subjects, English, Math, and Science, were collected at the end of the second nine-week grading period and at the end of the third term. They were compared to each other (see Appendix D) to judge if there had been an improvement and also to gauge the correlation between students' perceptions of their performance and the numerical reality. Two of the participating students saw an increase of at least one letter grade in all three subjects. Another two students accomplished an increase of at least one letter grade in two subjects. Five participants in the action research improved a minimum of one letter grade in one subject. Three students saw no change and one student actually dropped in one subject. Of the seven students who thought their grades had improved, six of them actually did improve by at least one letter grade in a minimum of one subject.

The author recorded in his observations 10 individual instances of students advocating for themselves. Some of the students who demonstrated self-advocating behaviors later reported that they hadn't taken any steps towards implementing such activities.

Interpretations

The purpose of this action research study was to determine the effects of self-knowledge on academic performance and self-advocacy skills. Students were given a

written list of recommendations for overcoming their learning deficits, along with a book, which provided information on how the brain processes data and how to work with specific deficiencies. Students with learning disabilities and their teachers, were surveyed, students' grades compared, and observations made to determine the outcome of the study.

Summary of Findings

Nine out of the 13 participating students, improved a minimum of one letter grade in one subject (see Appendix C & D). This would appear to indicate that increasing self-knowledge of specific learning disabilities does improve academic performance. However, only two-thirds of those students reported a better understanding of their learning disability. Six of the nine students thought they had used some of the suggestions they were given. Forty-six percent of the entire group stated that they had either increased their self-knowledge and/or used the recommendations for working with their disability. There were decreases of at least one letter grade in one subject by eight participants who believed they had a better understanding of their learning disability and/or had used the proscribed suggestions.

In contrast, a student who reported neither increased self-knowledge, nor using any of the ideas he had been offered, improved his grades by at least two marks in every subject. Another student increased his class scores by two letter grades in two subjects while stating that none of the materials he had been given had been of any use. Some of the students, who employed the resources they had been offered, saw no academic improvement, or worse yet, received only decreases in their grades. Based on these findings, the author felt that there was insufficient evidence to support the theory that, given the procedures followed in this research, increased self-knowledge of specific learning disabilities improves academic performance. On the other hand, it was noted that

following the steps of the study increased grades twice as many times as a decrease was found.

Despite the number of students who demonstrated academic improvement, only one teacher felt that the students had increased their self-knowledge of their specific disability and that there had been academic improvement because of it.

In answer to the question, "What are the effects of self-knowledge on self-advocacy?", the results were even more ambiguous. Only two of the 10 teachers surveyed noticed any increased self-advocacy and, as noted above, only one of those two believed it had a positive effect - despite the fact that 70% of the teachers surveyed felt that students should advocate for themselves and 90% stated they would be open to suggestions and that self-advocacy would improve academic performance. Six of the 13 students stated they had advocated for themselves. The researcher noted 10 instances of self-advocacy demonstrated by participating students. Given the hours of observations by the author, these individual acts account for no actual improvement in the desired activity.

Conclusions

There appeared to be a relationship between students receiving additional information about their learning disabilities and improved academic achievement. The results were substantial enough to indicate that the intervention had some positive outcomes. However, the two students with the highest-grade gains stated that they did not have a better understanding of their specific disability and they did not use the suggestions they were given. Almost 50% of the students reported asking teachers for changes in their instruction. Despite the fact that educators were aware that research into the effects of increased self-knowledge and self-advocacy was being done, and possibly were on a higher alert for the target behaviors, only one out of 10 teachers stated they

had observed an increase in self-advocacy. This brought into question what other factors were at work.

Participating students in the study were all in the ninth grade. This calls into question the effect that transitioning to a new environment, middle school to high school, has on students. Also, what are the effects of cognitive development, mental maturity, on understanding one's strengths and deficits, and developing self-advocacy skills? Sands and Doll (1996) found that in order to advocate for themselves, students must be able to create appropriate interactions with adults. Kendall (as cited in Sands & Doll, 1996) states that this skill develops gradually, through childhood and into adolescence. Part of positive social interaction is the ability to understand another person's point of view. According to Piaget(as cited in Sands & Doll), this "social perspective taking emerges as children come to realize that their perspective is not shared by all.

Development of these socio-cognitive skills may be slowed in students with learning disabilities. Overcoming one's egocentricity could be more difficult for students who are used to having adults take care of their instructional and life skills needs. Teachers and parents may be unwittingly helping their charges in a state of learned helplessness, believes Michaels (as cited in Kling, 2000), by advocating for students and not allowing them to make their own choices. When these students enter high school and then move on to adult life, they are unprepared for making their own decisions. Their learned passivity, Engly (as cited in Roffman & Herzog, 1994) believes, sabotages their ability to express their needs and jeopardizes their success in all aspects of life. Hill and Tollerud (1996) postulate that the stigma of being labeled "learning disabled" causes a loss of self-dignity. Loss of dignity, states Hammacheck (as cited in Roffman & Herzog), can cause students to become discouraged and apathetic.

Delivery of the intervention must also be considered. Simply offering written information about the subject, with very little verbal interaction or guidance, may explain why students thought they had advocated for themselves, while their teachers didn't notice any change. If a student's deficits were in written language, it is probable that, if the information was even read, it was not understood. In order to be effective, especially when dealing with different means of processing, instruction in specific learning disabilities needs to be multi-faceted, in order to reach individual learning strengths. Students need to be exposed to appropriate advocating skills through modeling and allowed to practice them in a safe environment. We don't simply hand a person a hammer and saw and expect them to build a house. Tools are useless if their proper usage is not demonstrated and rehearsed.

One teacher, who saw no improvement in self-advocacy, implied that students didn't have the needed skills to succeed. She said that students need to know how to access success, and know that they are capable of it, before they can advocate for themselves. Warger and Burnette (2000) found that instruction in these skills can begin as early as elementary grades or perhaps even pre-school (Kling 2000). By waiting until high school to begin developing self-advocacy skills, we run the risk of having to undo years of learned helplessness, which deprives students from developing a sense of self-determination.

Plan of Action

The author would recommend that self-advocacy skills training be designed into the curriculum, beginning in elementary school. Students should learn about their weaknesses and strengths. They need to understand what the whole IEP (Individualized Education Plan) process is about and be encouraged to take an active part in developing their own IEP. Adolescents with learning disabilities should have the opportunity to take

a course in self-advocacy/self-determination during their ninth grade year, or earlier, if possible. According to Skinner (1998), being able to express strengths and weaknesses and appropriately request accommodations are basic skills, necessary for individuals with learning disabilities to succeed.

Suggestions for Future Research

This action research created enough questions to keep the author busy for quite awhile. What are the effects of more written feedback and fewer graded assignments in establishing self-advocacy? How would a course in self-determination impact academic achievement? Should self-advocacy be incorporated into the general curriculum? Learned helplessness, how do we learn it? What comprises an effective self-advocacy curriculum? The researcher was both frustrated and elated to find that for every answer he believed he had found, at least two questions arose from the solution.

Limitations

Not enough time was allowed for gathering data at the end of the research. School being closed for two days, because of meteorological events compressed what was already a tight schedule. The researcher didn't have enough time to gather more follow-up surveys from the staff. The closings also delayed students' knowledge of their grades. At the time of the student survey, responses about academic improvement were based on speculation. Another study should include a preliminary survey for the students. It should also find ways to foster more parental involvement.

Summary

Originally, this author set out to learn more about information processing. His literature review led him from "processing", through brain research and back again. Following another path, into processing deficits, the researcher became curious about students ' self-knowledge of their specific learning disabilities. Would individuals, better

informed about their strengths and weaknesses, become better students academically? Would improving students' self-knowledge of their deficits help them to become better self-advocates?

Using the Cognitive Processing Inventory (CPI), the researcher gathered information about 13 students and their learning strengths and weaknesses. The individuals were then given recommendations to help them strengthen, or overcome, their deficits. Teachers and students were surveyed in order to find out if the intervention was successful in promoting self-advocacy skills and improving academic performance.

Results from the research tended to show that, while a majority of the participating students did display improved grades, not all of them felt it was connected to the suggestions they had received. Less than half of the students reported asking for changes/ advocating for themselves. Teachers who had the participants in class did not generally notice an increase in self-advocating behavior. The researcher observed 10 demonstrations of self-advocacy, but given the time spent observing, these examples occurred so rarely that they could have been coincidental.

Backed by the data gathered in this action research and the literature, the author believes that a course or curriculum of self-advocacy would guide students towards a more meaningful educational experience and allow them to make a more successful transition to post-secondary life.

References

Cano-Garcia, F., & Hewit Hughes, E. (2000). Learning and thinking styles: An analysis of their interrelationship and influence on academic achievement. Educational Psychology, 20 (4), 413-431.

Crouse, S., (1996). Uncovering the mysteries of your learning disability [On-line]. Available: http://www.ldinfo.com

Davies, P., (2000). Differentiation: Processing and understanding in teachers' thinking and practice. Educational Studies 26 (2), 191-204.

DeCiantis, S. M., & Kirton, M. J. (1996). A psychometric reexamination of Kolb's experiential learning cycle construct: A separation of level, style, and process. Educational & Psychological Measurement, 56 (5), 809-821.

Eisenman, L. T., & Chamberlin, M. (2001). Implementing self-determination activities. Remedial & Special Education, 22 (3), 138-147.

Embretson, S. (1995). The role of working memory capacity and general control processes in intelligence. Intelligence , 20, 169-189.

Gazzaniga, M. S. (1998). The split brain revisited. Scientific American, 279 (1), 51-55.

Gremli, J. (1996). Tuned in to learning styles. Music Educators Journal, 83 (3), 24-28.

Harris, R., & Robertson, J. (2001). Successful strategies for college-bound students with learning disabilities. Preventing School Failure, 45 (3), 125-131.

Hill, S. R. & Tollerud, T. R. (1996). Restoring dignity in at-risk students. School Counselor, 44 (2), 122-133.

Hitchings, W. E. (2001). The career development needs of college students with learning disabilities [Abstract]. Learning Disabilities Research and Practice 16 (1), 8-17.

Individuals with Disabilities Education Act of 1997, 20 U.S.C. 1400 et seq.

Kling, B. (2000). Assert yourself: Helping students of all ages develop self-advocacy skills. Teaching Exceptional Children, 32 (3), 66-70.

Lawson, M. J., & Chinnappan, M. (2000). Knowledge connectedness in geometry problem solving. Journal for Research in Mathematics Education, 31 (1), 26-44.

Lindsay, P. H., & Norman, D. A. (1972). An introduction to psychology. New York: Academic Press.

Martin, J., & Marshall, L. (1996). Infusing self-determination instruction into the IEP and transition process. In D. Sands & M. Wehmeyer (Eds.), Self-determination across the lifespan (pp. 215-236). Baltimore: Brookes.

Meneal, J., & Dwyer, F. (1999). Effect of varied rehearsal strategies and testing format on student achievement. International Journal of Instructional Media, 26 (4), 435-446.

Morris, C. D., Bransford, J. D., & Franks, J. J. (1997). Levels of processing versus transfer appropriate processing. Journal of Verbal Learning and Verbal Behavior, 16, 519-533.

Murry, B. (1998). Data smog: Newest culprit in brain drain. APA Monitor, 29 (3)1, 42.

Neisser, U. (1976). Cognition and reality: Implications and principles of cognitive psychology. New York: Freeman.

Reilly, D. (1998). The pace of instructional presentation, non-linear systems, effectiveness of cognitive processing, and needed research in the use of technology for instruction. Journal of Instructional Psychology, 25 (3), 151-166.

Ross, J. L., Drysdale, M. T. B., & Schultz, R. A. (2001). Cognitive learning styles and academic performance in two postsecondary computer application courses. Journal of Research on Computing in Education, 33 (4), 400-413.

Rothman, A.J. & Herzog, J.E. (1994). Helping young adults understand their learning disabilities. Journal of Learning Disabilities, 27 (7), 413-420.

Sands, D. J. & Doll, B. (1996). Fostering self-determination is a developmental task. Journal of Special Education 30, (1), 58-77.

Sheehan, A. D., & Sheehan, C. M. (2000). Lost in a sea of ink: How I survived the storm. Journal of Adolescent & Adult Literacy, 44 (1), 20-32.

Sheppard, S. (2001). Does mind matter? Education and conceptions of mind. Education Theory, 51 (2), 243-259.

Simon, C. S. (1999). On being dyslexic. ASHA, 41 (2), 19-24.

Skinner, M. E. (1998). Promoting self-advocacy among college students with learning disabilities. Intervention in School & Clinic, 33 (5), 278-284.

Springer, S., & Deutsch, O. (1981). Left brain, right brain. San Francisco: Freeman & Co.

Torrance, E. P., Reynolds, C. R., & Ball, O. E. (1977). Your style of learning and thinking, forms A and B: Preliminary norms, abbreviated technical notes, scoring keys and selected references. Gifted Child Quarterly, 21, 563-573.

Tsai, C. (1999). Content analysis of Taiwanese 14 year olds' information processing operations shown in cognitive structures following physics instruction, with relations to science attainment and scientific epistemological beliefs. Research in Science & Technological Education, 17 (2), 125-139.

Warger, C. & Burnette, J. (2000). Planning student-directed transitions to adult life [on-line]. Reston, VA: ERIC Clearinghouse on Disabilities and Gifted Education [Distributor].

Wehman, P. (2001). Life beyond the classroom: Transition strategies for young people with disabilities (3rd ed.). Baltimore, MD: Paul H. Brookes.

Zalewski, L. J., Sink, C. A., & Yachimowicz, D. J. (1992). Using cerebral dominance for education programs. Journal of General Psychology, 119 (1), 45-5.

Bibliography

Brinkerhoff, L. C. (1994). Developing effective self-advocacy skills in college-bound students with learning disabilities. Intervention in School & Clinic, 29 (4), 229-238.

Browder, D. M., Wood, W. M., Test, D. W., Karvonen, M. & Algozzine, B. (2001). Reviewing resources on self-determination. Remedial & Special Education, 22 (4), 233-255.

Field, S. (1996). Self-determination instructional strategies for youth with learning disabilities. Journal of Learning Disabilities, 29 (1), 40-53.

Field, S. & Hoffman, A. (1997). Self-determination during adolescence. Remedial & Special Education, 18 (5), 285-294.

Fulk (2000). Make instruction more memorable. Intervention in School & Clinic, 35 (3),183-185.

Hansen, E.J. & Stevens, J.A. (2000). The ethics of learner-centered education. Change, 33 (5), 40-48.

Hicks-Coolick, A. & Kurtz, P. D. (1997). Preparing students with learning disabilities for success in post-secondary education: Needs and services. Social Work in Education, 19 (1), 31-43.

Jolivette, K., Stichter, J.P., Nelson, C. M., Scott, T. M. & Liaupsian, C.J. (2000). Improving post-school outcomes for students with emotional and behavioral disorders [on-line]. Arlington, VA: ERIC Clearinghouse on Disabilities and Gifted Education [Distributor].

King-Sears & Bonfils, M.E. (1999). Self-management instruction for middle school students with ld and ed. Intervention in School & Clinic, 35 (2), 96-108.

Lambie, R. (2000). Working with families of at-risk and special needs students: A systems change model. Focus on Exceptional Children, 32 (6), 1-23.

Levinson, E. M. & Ohler, D. L. (1998). Transition from high school to college for students with learning disabilities: Needs, assessments, and services. High School Journal, 82 (1), 62-70.

Lombardi, T. P. & Savage, L. (1994). Higher order thinking skills for students with special needs. Preventing School Failure, 38 (4), 27-32.

Miller, S. D. & Atkinson, T. S. (2001). Cognitive and motivational effects of seeking academic assistance. Journal of Educational Research, 94 (6), 323-335.

Oliver, H. (1995). Influence of motivational factors on performance. Journal of Instructional Psychology, 22 (1), 45-50.

Palmer, C. & Roessler, R. T. (2000). Requesting classroom accommodations: Self-advocacy and conflict resolution training for college students with learning disabilities. Journal of Rehabilitation, 66 (3), 38-44.

Richardson, R. C. (2000). Teaching social and emotional competence. Children & Schools, 22 (4), 246-252.

Van Reusen, A. K. (1996). The self-advocacy strategy for education and transition planning. Intervention in School & Clinic, 32 (1), 49-55.

Wall, M. E. & Dattillo, J. (1995). Creating option-rich learning environments: Facilitating self-determination. Journal of Special Education, 29 (3), 276-295.

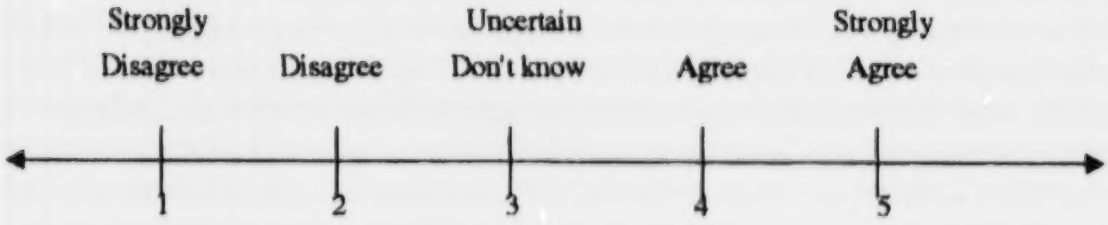
Wehmeyer, M. L., Agran, M. & Hughes, C. (1998). Teaching self-determination to students with disabilities: Basic skills for successful transition. Baltimore, MD: Paul H. Brookes.

Wehmeyer, M. L., Agran, M. & Hughes, C. (2000). A national survey of teachers' promotion of self-determination and student-directed learning. Journal of Special Education, 34 (2), 58-69.

Appendices

Appendix A

Preliminary Teacher Survey



1 2 3 4 5 1) I believe that "inclusion" is the best way to teach students with learning disabilities.

1 2 3 4 5 2) I currently have students with learning disabilities in my classroom who are struggling to keep up with the class work.

1 2 3 4 5 3) I am aware of the specific learning disability of each of my students with learning disabilities.

1 2 3 4 5 4) I am aware of the modifications and accommodations for each of the students with learning disabilities in my classes.

1 2 3 4 5 5) To the best of my ability, I comply with the modifications and accommodations of which I am made aware.

1 2 3 4 5 6) The students with learning disabilities in my classes know specifically what their disability is.

1 2 3 4 5 7) Students with learning disabilities should advocate for themselves.

1 2 3 4 5 8) I would be open to suggestions for modifications and accommodations made by self-advocating students with learning disabilities.

1 2 3 4 5 9) Students with learning disabilities who advocate for themselves would have a better chance of improving their academic achievement.

1 2 3 4 5 10) I think my time and energy could be put to better use.

Appendix A

Preliminary Teacher Survey

Table A1

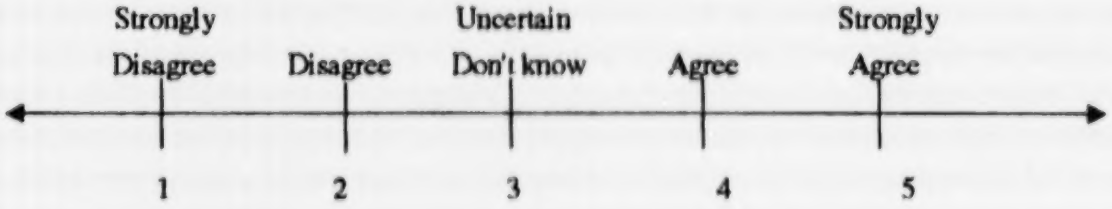
Teacher Responses to Preliminary Survey

Teachers	Comply with mods./ aware of Question 5	Students know disabilities Question 6	Advocate for selves Question 7	Open to suggestions Question 8	Advocating improves achieve. Questions 9
E6	5	3	3	4	4
E7	5	5	5	5	5
F5	5	4	4	5	5
M12	5	2	5	5	5
S8	4	1	4	4	4
S15	5	2	4	4	4
S16	5	2	5	5	5
S20	4	3	2	3	2
S22	3	3	4	5	5
V2	3	3	2	5	4

Note. Numbers indicate Likert scale ratings (1 = strongly disagree, 2 = disagree, 3 = uncertain or don't know, 4 = agree, 5 = strongly agree.).

Appendix B

Follow-up Teacher Survey



1 2 3 4 5 1) Students with learning disabilities should advocate for themselves.

1 2 3 4 5 2) Students with learning disabilities who advocate for themselves would have a better chance of improving their academic achievement

1 2 3 4 5 3) I have noticed an increase in the use of self-advocacy by students with learning disabilities during the last nine weeks.

1 2 3 4 5 4) Students who have advocated for themselves during the last nine
N/A weeks have demonstrated a greater self-knowledge of their learning disability.

1 2 3 4 5 5) Students who have advocated for themselves in the last nine weeks
N/A have improved their academic performance.

Comments:

Appendix B

Follow-up Teacher Survey

Table B2

Teacher Responses to Follow-up survey

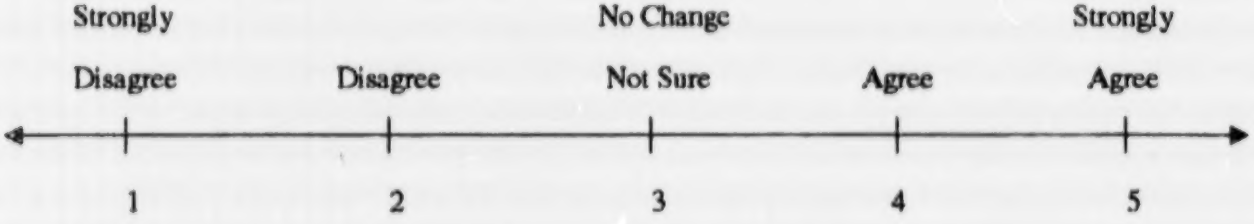
Teachers	Advocate for selves Question 1	Advocating improves achieve. Question 2	Noticed increased advocacy Question 3	Students demonstrate greater knowledge Question 4	Improved academic perf. Question 5
E6	4	4	2	n/a	n/a
E7	5	3	4	3	3
F5	4	4	2	n/a	n/a
M12	3	2	3	3	3
S8	5	5	2	n/a	n/a
S15	5	5	4	4	4
S16	5	4	2	n/a	n/a
S20	2	2	2	2	2
S22	3	3	2	2	2
V2	2	2	1	3	2

Note. Numbers indicate responses to questions on the Likert scale, (1 = strongly disagree, 2 = disagree, 3 = uncertain/don't know, 4 = agree, and 5 = strongly agree,).

Appendix C

Student Survey

Using the scale below as a guide, please answer the following questions by circling the number that comes the closest to your feelings. Circle the number 3 if there has been no change or you are not sure.



1. My grades improved during the last 9-week grading period. 1 2 3 4 5
2. The improvement was a result of having a better understanding of my specific learning disability. 1 2 3 4 5
3. I used some of the suggestions I was given to help me in my classes. 1 2 3 4 5
4. I asked my teachers to make some changes to help me do better in my classes. 1 2 3 4 5
5. I think other students would do better in their classes if they had this additional help. 1 2 3 4 5

Comments:

Appendix C

Student Survey

Table C3

Student Responses to Survey

Students	Grades improved Question 1	Improvement/ better understanding Question 2	Used suggestions Question 3	Asked for changes Question 4	Others would benefit Question 5
P1	4	4	4	3	5
P2	5	4	4	4	5
P3	3	4	5	3	5
P4	3	2	1	1	2
P5	3	2	4	4	4
P6	4	3	4	3	5
P7	5	4	4	3	5
P8	5	4	5	4	5
P9	3	4	2	4	3
P10	3	3	4	3	5
P11	3	4	4	2	5
P12	5	2	2	5	4
P13	5	4	3	4	5

Note. Numbers indicate question responses on the Likert scale, (1 = strongly disagree, 2 = disagree, 3 = no change/unsure, 4 = agree, and 5 = strongly agree,).

Appendix D

Student Grade Comparison

	Math		Science		English	
Students	2nd 9 wk.	3rd 9 wk.	2nd 9 wk.	3rd 9 wk.	2nd 9 wk.	3rd 9 wk.
P1	C 81	D+ 75.6	F 62.4	F 57.5	F 38	D+ 76
P2	B 88.1	B 86.8	A 95.1	A- 92.9	D 72.7	C+ 84.4
P3	C 81.8	B 90.1	D 71.7	D- 70	D 71.5	F 68.3
P4	B 87.7	D- 71	C- 77.8	A- 94.2	D- 69.7	B- 85.2
P5	D- 70	D 73	F 58.5	F 57.9	D- 71.3	F 56.9
P6	C+ 83.7	B+ 91.6	B 90.3	B+ 91.4	D 73.3	F 63.1
P7	C+ 84.3	D+ 76	C 80.6	B 89.7	D- 71	C+ 84.4
P8	D+ 75.3	D+ 74.9	D- 70.1	D- 70.3	D- 70.1	D- 71.4
P9	B- 86	C+ 84.9	C 77.6	D- 71.1	A 97	A- 94
P10	B 88.5	D 73.2	D- 70.1	D- 69.6	A 96	A- 94.4
P11	D 72.2	Inc.	F 51.9	F 53.8	F 50.2	C- 77.7
P12	F 51.6	C- 77.2	D+ 75.7	A 94.5	F 67.2	C- 77
P13	B- 91.6	A 97.1	B 89.1	A 94.7	C- 77.8	B 90.2

Note. Numbers indicate grade percentages.

Appendix E

CPI for Parents and Student

Cognitive Processing Inventory for Students (CPI-S) ages 7-19 (Crouse, 1998)

(Copyright 1999, Scott L. Crouse. Used with permission.)

Name of student being rated:

_____School:_____

Age:_____ Grade:_____ Date:_____

Rated by: Self Mother Father Other_____

Part 1:

The following questions may provide valuable information which can help in the interpretation of the ratings obtained on pages 2 and 3. Please answer each of these questions to the best of your ability by circling the correct response, as it applies to the student being rated.

1. Sex: Male Female
2. Handedness: Right Left Both ?
3. Primary ethnic Origin: White Black Asian American Indian Hispanic
4. Is any medication taken on a regular basis? Yes No For what?_____
5. Special Education Services? None LD ED Speech/Lang. OHI Other_____
6. Are there any other family members with learning disabilities? Yes No (if yes, circle below)

   Parent Sibling Aunt/Uncle Grandparent Cousin
7. Were there any complications before or during birth? Yes No ?
8. Has there ever been a serious head injury? Yes No ?
9. Has there ever been any medical issue that may have affected the brain? Yes No ?

Appendix E

CPI for Parents and Students

10. Did the student have many ear infections during infancy or childhood? Yes No ?
11. Is there an allergy or asthma? Yes No ?
12. Is there an identified or suspected attention disorder (ADD or ADHD)? Yes No ?
13. Does this student have an identified or suspected Learning Disability? Yes No ?
14. In your opinion, are there any behavior problems which may interfere with school? Yes No ?
15. Is there a vision problem that is not fully correctable with glasses? Yes No ?
16. Is there a hearing problem that is not fully corrected? Yes No ?
17. Compared to other students, time spent studying is: More Less Same
18. Overall, which of these areas is the strongest? Reading Math Writing
19. Overall, which of these areas is the weakest? Reading Math Writing

Part 2:

For the following 40 items, rate yourself (your child) based upon information from any reliable source (i.e. direct observation, interview, assessment data, etc.). Use the following scale to circle a number from 1 to 5 to the right of each item. Use 3 if uncertain.

Obvious Difficulty	Apparent Weakness	Average or Uncertain	Not a Problem	Obvious Strength
1	2	3	4	5

1. Ability to understand or remember questions, directions, or instructions. Like when a teacher is just lecturing without any charts or pictures. 1 2 3 4 5
2. Ability to remember the names of new people that you (he/she)meet. 1 2 3 4 5
3. Ability to remember new phone numbers and/or addresses. 1 2 3 4 5

Appendix E

CPI for Parents and Students

	Obvious Difficulty	Apparent Weakness	Average or Uncertain	Not a Problem	Obvious Strength				
	1	2	3	4	5				
4.	Ability to remember the names of characters or other specific details in a story or movie.				1	2	3	4	5
5.	Ability to remember or understand the basic idea of what happened in a movie story - general information rather than specific details.				1	2	3	4	5
6.	Ability to quickly think through a difficult problem or situation. Does a better answer come later in the day or even the next day?				1	2	3	4	5
7.	Ability to get or stay organized. Does organization come easy?				1	2	3	4	5
8.	Ability to "plan" and to break large tasks into smaller parts or steps.				1	2	3	4	5
9.	Ability to pay attention to instructions and lectures.				1	2	3	4	5
10.	Ability to remember or follow complex directions or requests (involving 3 or more steps). Does the request need to be repeated?				1	2	3	4	5
11.	Ability to read quickly and fluently.				1	2	3	4	5
12.	Ability to quickly sound out new words.				1	2	3	4	5
13.	Ability to understand what is read just using the "context" (without pictures).				1	2	3	4	5
14.	Ability to understand what is read when there are pictures for clues.				1	2	3	4	5
15.	Handwriting neatness.				1	2	3	4	5
16.	Writing mechanics (spelling, punctuation, capitalization, etc.)				1	2	3	4	5
17.	Writing content. Ability to express ideas in writing when the "mechanics" don't matter.				1	2	3	4	5

Appendix E

CPI for Parents and Students

Obvious Difficulty	Apparent Weakness	Average or Uncertain	Not a Problem	Obvious Strength
1	2	3	4	5

18. Letter/word orientation. This is a "difficulty" if letters are ever reversed (b/d, etc.), out of order in words or starting words with the wrong letter.	1	2	3	4	5
19. Ability to remember specific formulas for solving math problems.	1	2	3	4	5
20. Ability to estimate or figure out the answer to math problems without using a specific formula.	1	2	3	4	5
21. Verbal speed - ability to talk quickly and clearly.	1	2	3	4	5
22. Verbal fluency without noticeable pauses or groping for words. Is it difficult to come up with the right words to express a thought?	1	2	3	4	5
23. Ability to solve visual or mechanical puzzles or problems.	1	2	3	4	5
24. Ability to recognize voices (like on the telephone).	1	2	3	4	5
25. Ability to stay focused and recheck tasks without making careless mistakes.	1	2	3	4	5
26. Ability to be creative and come up with new ideas or new ways of doing something.	1	2	3	4	5
27. General sense of humor. Do you (he/she) see humor in lots of situations or have difficulty understanding what others think is funny?	1	2	3	4	5
28. Rhythmic or musical skills (even if an instrument is not played).	1	2	3	4	5
29. Arts and crafts skills (drawing, painting, sculpture, etc.).	1	2	3	4	5
30. Ability to visualize and imagine things in your (his/her) head (pictures, faces, words, numbers, etc.)	1	2	3	4	5
31. Ability to accomplish long-term goals or projects.	1	2	3	4	5

Appendix E

CPI for Parents and Students

Obvious Difficulty	Apparent Weakness	Average or Uncertain	Not a Problem	Obvious Strength
1	2	3	4	5

32.	Directional skills (right/left, north/south, etc.).	1	2	3	4	5
33.	Ability to complete jigsaw puzzles.	1	2	3	4	5
34.	Ability to remember the words to new popular songs.	1	2	3	4	5
35.	Ability to remember the tunes to new popular songs?	1	2	3	4	5
36.	Ability to go someplace new (city, mall, school, etc.) without getting lost.	1	2	3	4	5
37.	Athletic abilities/coordination.	1	2	3	4	5
38.	Ability to remember the rules to games.	1	2	3	4	5
39.	Ability to keep up with activities. Are you (he/she) the first to start and/or finish something (4 or 5) or are others kept waiting (1 or 2)?	1	2	3	4	5
40.	Ability to sit still for long periods of time in school?	1	2	3	4	5

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: How Can I Help Myself? Self-knowledge, Self-advocacy, Academic Success	
Author(s): David R. Fassett	
Corporate Source:	Publication Date:

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents	The sample sticker shown below will be affixed to all Level 2A documents	The sample sticker shown below will be affixed to all Level 2B documents
PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY Sample TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) 1	PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY Sample TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) 2A	PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY Sample TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) 2B
Level 1	**Level 2A**	**Level 2B**
✓ Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) and paper copy.	Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only	Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Signature: David R Fassett	Printed Name/Position/Title: David R. Fassett/Teacher	
Organization/Address: 1 Warrior Path Syracuse, IN 46567	Telephone: 574-457-3147	FAX: 574-457-4364
	E-Mail Address: fasd@wawasee.k12.in.us	Date: 6/1/02

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, or, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

ERIC Processing and Reference Facility
4483-A Forbes Boulevard
Lanham, Maryland 20706
Telephone: 301-552-4200
Toll Free: 800-799-3742
FAX: 301-552-4700
email: info@ericfac.piccard.csc.com
WWW: http://ericfacility.org